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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/527,584	03/17/2000	Peter J. Ashwood Smith	9-13528-94US	2892

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EXAMINER	
ZIA, SYED	

ART UNIT	PAPER NUMBER
2131	

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/527,584	ASHWOOD SMITH, PETER J.	
	Examiner	Art Unit	
	Syed Zia	2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

This office action is in response to amendments filed on November 04, 2005. Original application contained Claims 1-28. Applicant previously amended Claims 1, 12, 15, 26, and added Claims 29-30. Applicant currently amended Claims 1, 15, and 29-30. The amendments filed on November 04, 2005 have been entered and made of record. Presently pending claims are 1-30.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 04, 2005 has been entered.

Response to Arguments

Applicant's arguments filed on November 04, 2005have been fully considered but they are not persuasive because of the following reasons:

Regarding Claims 1, 15, and 29-39 applicants argued that the cited prior art [Hsu] (U. S. patent 6,363,319) does not teach both, " a) *determining cost metric to be used for the connectionless traffic"* and b) *cited prior art only teaches cost metrics used for connection-oriented traffic*".

This is not found persuasive. Cited prior art teaches a system and method for selecting a route for a flow from a number of network paths connecting a source to a destination, that involves: determining cumulative costs for a number of candidate paths from the computer network paths using a cost bias which is dynamically calculated based on at least one of a flow attribute and a path attribute; and selecting an optimal path, corresponding to the selected route, having a minimum of the cumulative costs. Cited prior art provides simple and efficient selection of routes in a system of computer networks. Increases traffic efficiency by taking into account bandwidth and the traffic requirements in route selection by selecting an optimal path corresponding to the selected route and having a minimum of the cumulative costs, and a route selection system (col.6 line 11 t col.8 line 35).

As a result, cited prior art does implement and teaches a system and method of efficient, and dynamic allocation of shared network resources between connection-oriented and connectionless traffic in a communication network.

Applicants still have failed to explicitly identify specific claim limitations, which would define a patentable distinction over prior arts. Therefore, the examiner asserts that Cited prior art does teach or suggest the subject matter broadly recited in independent and dependent claims. Accordingly, rejections for Claims 1-30 are respectfully maintained.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-30 rejected under 35 U.S.C. 102(e) as being anticipated by Hsu. U. S. Patent 6,363,319.

3. Regarding Claims 1, and 15 Hsu teaches and describes a system and method for selecting a route for a flow from a number of network paths that involves selecting route based on cost bias that is dynamically calculated based on flow and path attributes (Fig.1-8), comprising:

- determining a resource requirement of the connection-oriented traffic, and dynamically adjusting a respective traffic metric to be used for routing connectionless traffic based on the determined resource requirement of the connection-oriented traffic, and routing the connectionless traffic based on the adjusted traffic metric, thereby providing the logical allocation of resources for connectionless traffic based on the resource requirement of connection-oriented traffic (col.1 line 66 to col.2 line 10, col. 2 line 50 to col.3 line 38, and, col.5 line 28 to line 55).

4. Regarding Claim 29 Hsu teaches and describes a method of managing a logical allocation of resources between connection-oriented traffic and connectionless traffic being routed through a shared physical network element of a communication network (fig.1-8), the method comprising:

- in response to a change in resources allocated to a predefined path through the shared physical network element, determining an updated amount of resources of the shared physical network element allocated to connection-oriented traffic; and dynamically adjusting a respective connectionless traffic metric of the shared physical network element based on the updated resources allocated the connection-oriented traffic, and routing the connectionless traffic based on the adjusted traffic metric (col.1 line 66 to col.2 line 10, col. 2 line 50 to col.3 line 38, and, col.5 line 28 to line 55).

5. Regarding Claims 30 Hsu teaches and describes a shred network element operative within a communication network capable of end-to-end transport of connection-oriented traffic

and connectionless traffic through the shared network element, the shared network element comprising:

- means responsive to a change in resources allocated to a predefined path through the shared physical network element, determining an updated amount of resources of the shared physical network element allocated to connection-oriented traffic and means for adjusting a connectionless traffic metric based on the updated resources allocated the connection-oriented traffic, and means for routing the connectionless traffic based on the adjusted traffic metric (col.1 line 66 to col.2 line 10, col. 2 line 50 to col.3 line 38, col.5 line 28 to line 55, and col.6 line 11 to line 55).

6. Claims 2, 4, 16 and 18 are rejected applied as above rejecting Claims 1, and 15. Furthermore, Hsu teaches and describes allocation of resources routed through a shared physical network, wherein

- the connection-oriented traffic comprises multi-protocol label switched (MPLS) traffic (Fig.2, and col.5 line 7 to line 24); and

- the connectionless traffic comprises internet protocol (IP) packet traffic (Fig. 1A, and col.3 line 39 to line 53).

7. Claims 3, 5, 17, and 19 are rejected applied as above rejecting Claims 2, 4, 16 and 18. Furthermore, Hsu teaches and describes dynamic allocation of shared network resources, comprising:

- the step of determining the resource requirement of the connection-oriented traffic comprises the steps of: receiving MPLS reservation requests in respect of the shared physical network element, and dynamically adjusting a total amount of resources required to satisfy the received MPLS reservation requests (col.1 line 66 to col.2 line 10, col.5 line 28 to line 55);

- routing of the connectionless traffic is controlled using an interior gateway protocol (IGP) routing system adapted to calculate a shortest path route of the connectionless traffic through the communications network, the shortest path routing being based on a respective metric of each physical network element forming the network (Fig.2, and col. 5 line 7 to line 24).

8. Claims 6, 7, 11, 20, 21, and 25 are rejected applied as above rejecting Claims 5, and 19. Furthermore, Hsu teaches and describes system and method of route selection, wherein:

- the step of dynamically adjusting the respective metric comprises the steps of: increasing the respective metric as the determined resource requirement of the connection-oriented traffic increases, and decreasing the respective metric as the determined resource requirement of the connection-oriented traffic decreases (col.6 line 11 to line 55);

- the respective metric is a link distance vector associated with a respective link connected to a node of the communications network, and the respective metric is a link cost factor associated with a respective link connected to a node of the communications network (Fig.3, and col.5 line 25 to col.6 line 9).

9. Claims 8-10, 12-14, 22-24, and 26-28 are rejected applied as above rejecting Claims 7, 21,and 25. Furthermore, Hsu teaches and describes resource management in communication network, wherein:

- the step of dynamically adjusting the respective metric comprises the steps of: determining an updated value of the link distance vector, and updating a mapping table maintained by the node with the updated value of the link distance vector (col.6 line 56 to col.7 line 34);

- the step of determining an updated value of the link distance vector comprises a step of querying a resource allocation table comprising a plurality of characteristic resource allocation values and a respective link distance vector value corresponding to each characteristic resource allocation value (col.4 line 31 to line 47, and col. 5 line) to line 13);

- the step of querying the resource allocation table comprises the steps of: identifying the characteristic resource allocation value which most closely matches the determined resource requirement of the connection-oriented traffic, and selecting the corresponding link distance vector as the updated link cost factor (col.11 line 53 to line col.12 line 3);

- the step of dynamically adjusting the respective metric comprises the steps of: determining an updated value of the link cost factor, updating a PATH table maintained by the node with the updated link cost factor value, and propagating a link state packet containing the updated link cost factor value to neighboring nodes within the network (col.9 line 15 to col10 line 62);

- the step of determining an updated value of the link cost factor comprises a step of querying a resource allocation table comprising a plurality of characteristic resource allocation

values and a respective link cost factor value corresponding to each characteristic resource allocation value (col.8 line 48 to col.10 line 9);

- the step of querying the resource allocation table comprises the steps of: identifying the characteristic resource allocation value which most closely matches the determined resource requirement of the connection-oriented traffic, and selecting the corresponding link cost factor as the updated link cost factor (col.10 line 21 to line 62).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Syed Zia whose telephone number is 571-272-3798. The examiner can normally be reached on 9:00 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

sz
January 12, 2006